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ABSTRACT

Westbrook (1983) challenged the validity of the construct "career maturity" because measures such as the Career Maturity Inventory Attitude Scale (Crites, 1973) correlate to measures of mental ability. Rather than interpreting this association as evincing lack of discriminant validity, the association should be interpreted as supporting the convergent validity of the Career Maturity Inventory Attitude Scale (CMI-AS) because career development theory postulates that career maturity should relate to other dimensions of general maturity, including mental maturity and intelligence (Super, 1955; Super, et. al., 1957). Some minimum level of intelligence is required for the development of career attitudes and competencies because intelligence is, presumably, directly related to the acquisition and application of domain-relevant behaviors. More importantly, a measure of a conative variable like attitudinal career maturity may relate to intelligence as long as it also relates to other variables which, in turn, are unrelated to intelligence. A key test to determine if the CMI-AS measures something other than intelligence is whether or not the CMI-AS correlates to measures of other dimensions of general maturity that do not correlate to intelligence. (Studies showing the indirect or circumstantial validity of the CMI-AS are presented to support its construct validity as a measure of career maturity.) (Author)

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Interpreting the Career Maturity Inventory Attitude Scale's Relationship to Measures of Mental Ability

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Running Head: CMI Validity

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Abstract

Westbrook (1983) challenged the validity of the construct "career maturity" because measures such as the Career Maturity Inventory Attitude Scale (Crites, 1973) correlate to measures of mental ability. Rather than interpreting this association as evincing lack of discriminant validity, the association should be interpreted as supporting the convergent validity of the Career Maturity Inventory Attitude Scale (CMI-AS) because career development theory postulates that career maturity should relate to other dimensions of general maturity, including mental maturity and intelligence (Super, 1955; Super, et. al., 1957). Some minimum level of intelligence is required for the development of career attitudes and competencies because intelligence is, presumably, directly related to the acquisition and application of domain-relevant behaviors. More importantly, a measure of a conative variable like attitudinal career maturity may relate to intelligence as long as it also relates to other variables which, in turn, are unrelated to intelligence. A key test to determine if the CMI-AS measures something other than intelligence is whether or not the CMI-AS correlates to measures of other dimensions of general maturity that do not correlate to intelligence. Studies showing the indirect or circumstantial validity of the CMI-AS are presented to support its construct validity as a measure of career maturity.

Interpreting the Career Maturity Inventory Attitude Scale's Relationship to Measures of Mental Ability

If a construct is taken seriously by a profession, then its validity is repeatedly challenged (Cronbach, 1971, p. 465). Serious challenges consist of counterhypotheses or alternative constructs to account for the behavior. A construct being challenged in vocational psychology is "career maturity." Westbrook (1982, 1983) asserted that career maturity instruments do not fit the trait name and that "the concept of career maturity is an endangered species." A key argument in this challenge is that career maturity should be relatively independent of mental ability, yet numerous studies report moderate correlations between measures of career maturity and measures of mental ability (Palmo & Lutz, 1983). In particular, Westbrook has challenged the construct validity of Crites' (1973) Career Maturity Inventory Attitude Scale (CMI-AS). Westbrook, Cutts, Madison, and Arcia (1980, p. 273) claimed that the CMI-AS does not conform to Campbell's (1960) standard for discriminant validity because it correlates to measures of mental ability. Moreover, they interpreted this correlation as showing that the CMI-AS actually measures ability or achievement rather than career maturity (Westbrook, et. al., 1980, p. 274).

The fact that an attitudinal career maturity measure correlates to mental ability need not lead to the conclusion that the measure is invalid nor that the construct is meaningless. On the contrary, the CMI-AS should correlate to mental ability because it measures a mental process (Ware, 1980) which mediates the development of career choice competencies and realistic

career decision-making. Both Crites (1965) and Super (1981) have described their respective attitude scales as conative in nature, that is, assessing an aspect of personality characterized as conscious, purposive, and willful (Wolman, 1973). Because the CMI-AS measures conative dispositions that are conscious, purposive, and verbal, it should relate to measures of mental ability. In addition, the CMI-AS should correlate to measures of mental or learning ability because individuals learn attitudes toward career choice as they adapt to their society. More intelligent individuals should be more likely to learn realistic attitudes toward career choice (Crites, 1971; Super, 1955; Super, Crites, Hummel, Moser, Overstreet & Warnath, 1957).

This does not mean that intelligence is synonymous with career maturity as Westbrook, et. al. (1980, p. 277) imply when they ask "Shouldn't it be possible for students of high intelligence to be career immature and students with low intelligence to be career mature?" The correlation of the CMI-AS to intelligence may be due to the covariation of both variables with a third variable such as parental attitudes. A composite relationship has not yet been studied but there is evidence that both mental ability (Bayley, 1970) and career maturity (Lee, 1984; McNair & Brown, 1983) relate to parental attitudes. Miller (1978) reported that high CMI-AS scores correlated to receiving positive reinforcement from both parents and having an open, positive relationship with one's father whereas low CMI-AS scores correlated to perceptions of one's parents as rejecting and as imposing parental goals on their children. He concluded that positive parental attitudes and behaviors facilitate career maturation whereas negative attitudes and behaviors impede career maturation. The same parental attitudes probably facilitate or thwart

children's mental development.

To be a meaningful and parsimonious construct, career maturity need not diverge from intelligence but it must converge with other indices of general maturity which are unrelated to intelligence. In arguing that the CMI-AS actually measures mental ability, Westbrook, et. al. (1980) and Palmo and Lutz (1983) rely for support on the direct correlation between the CMI-AS and measures of mental ability. However, a thorough test of the hypothesized identity of the CMI-AS and ability measures also requires indirect validation (Campbell, 1960). Cattell and Warburton (1967, p. 34) explained that "as a general principle and practice in applied psychology it would seem desirable always to supplement and check direct validity measures with indirect, circumstantial validity estimates, for we have here one of the truly independent approaches to the same validity values." If Westbrook's interpretation is right, then the CMI-AS should demonstrate indirect validity as a measure of mental ability, that is, the CMI-AS should correlate with a variety of variables in just the same way as ability measures relate to these variables.

The literature on the CMI-AS includes many studies that report career maturity relates to non-intellective variables associated with general maturity and adjustment which are not, in turn, related to intelligence. For example, identity, self-esteem, time perspective, and locus of control are unrelated to intelligence but are related to career maturity. Locus of control has not been found to correlate to intelligence (Rotter, 1966; Lefcourt, 1976), but it correlates (r = .20 to .35) to the CMI-AS (Gable, Thompson, & Glanstein, 1976; Khan & Alvi, 1983; Miller & Winder, 1976; Thomas & Carpenter, 1974).

Self-esteem has not been found to correlate to intelligence (Coopersmith, 1967; Geraty, 1983; Wylie, 1974), but it correlates (r = upper .30's) to the CMI-AS (Crook, Healy, & O'Shea, 1984; Dillard, 1976; Holland, 1981; Lawrence & Brown, 1976; Pound, 1978; Seaward, 1978). Sense of identity has not been found to correlate to intelligence (Marcia, 1980) but it correlates to the CMI-AS (Gasper & Omvig, 1976; Holland & Holland, 1977; Martin & Redmore, 1978; Munley, 1975).

Time perspective has not been found to correlate to intelligence (Dickstein, 1969; Doob, 1971), but it correlates to career maturity (Neely & Hanna, 1977; Savickas, Silling, & Shwartz, in press). Lopez-Baez (1981) reported that optimism about the future correlated (r = .51) to the CMI-AS and that sense of continuity between the present and future correlated (r = .40) to the CMI-AS. Furthermore, in examining the relationships of the CMI-AS subscales to the optimism and continuity measures, she found that the time perspective variables correlated highest to the orientation subscale (continuity r = .39; optimism r = .48) and lowest to the independence subscale (continuity r = -.04; optimism r = .19). This provided evidence for the convergent validity of the orientation subscale and divergent validity of the independence subscale. Time perspective should not relate to independence but it should relate to orientation which measures the extent to which an individual is familiar with and relating to the career decision-making process and not, as Westbrook (1983, p. 268) wrote, the "extent to which the individual is task- or pleasure-oriented in his or her attitudes toward work and the values he or she places upon work."

If Westbrook was right in arguing that career maturity instruments actually measure intelligence, then career maturity instruments should be unrelated to variables which are unrelated to intelligence. Clearly, the CMI is not a poor man's intelligence test. The Career Maturity Inventory-Attitude Scale relates, as it should, to measures of intellective and non-intellective dimensions of general maturity.

Although one can disagree with how Westbrook, et. al. (1980) and Palmo and Lutz (1983) interpreted the CMI-AS' correlation to intelligence, one cannot deny that they focus our attention on an important issue in understanding the construct of career maturity. The reported linear association between conative career maturity and intelligence has not been studied as it deserves to be. We need to plot carefully the relationship of career maturity to intelligence over the entire range of mental ability to check for threshold, deceleration, and curvilinear relationships. For example, consider that Westbrook, et. al (1980) and Palmo and Lutz (1983) reported moderate correlations ($\underline{r}$ = .49, .56, .51) between the CMI-AS and intelligence measures within heterogeneous groups of individuals (i.e., rural ninth graders, technical college students, C.E.T.A. clients) at the low average ability level whereas Carek (1965), Savickas (1976), and Williams (1967) reported low correlations ($\underline{r}$ = .17, .03, .20) between the CMI-AS and intelligence measures within homogeneous groups of individuals (i.e., university students) at the high average ability level. Considering these findings suggests that the relationship of attitudinal career maturity to intelligence probably does not conform to the simple linear association that has been criticized. Hopefully, future studies of attitudinal career maturity's relationship to intelligence will

examine the full range of ability levels; sample heterogeneous groups of subjects; check for threshold, decelerating, and curvilinear relationships; and use the multimethod-multitrait model of construct validation.

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